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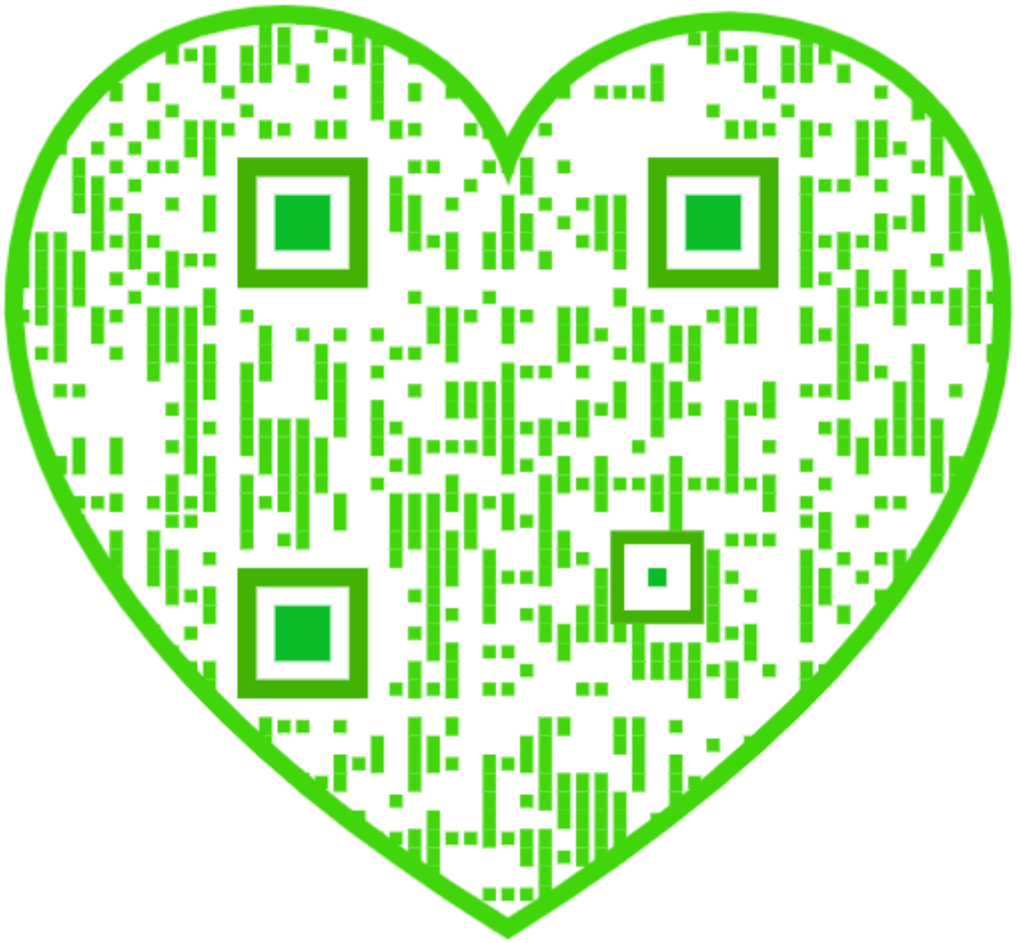

JOHN A. SEAVERNS

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BY THE SAME AUTHOR

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(FIFTH EDITION)

BEING A

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HORSE-MASTERSHIP

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ON

BAILLIÈRE, TINDALL AND COX
8, HENRIETTA STREET, COVENT GARDEN
1911
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HORSE-MASTERSHIP

A LECTURE WITH AN APPENDIX

INCLUDING SOME NOTES ON THE SCHOOLING OF JUMPERS, THE BACTERIOLOGY OF COUGHING, AND THE DISEASES CARRIED BY HORSE-FLIES, TICKS, AND TSETSE FLIES

BY

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AUTHOR OF "WAR WITH DISEASE," "BREEDING RACEHORSES ON A COMMON-SENSE SYSTEM"

LONDON

BAILLIÈRE, TINDALL AND COX

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1911

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DEDICATED BY PERMISSION

TO

COLONEL THE MARQUIS OF WATERFORD

K.P., M.F.H.

Commanding Officer South Irish Horse

IN RESPECTFUL APPRECIATION OF HIS SUCCESSFUL EFFORTS

TO IMPROVE THE LIFE CONDITIONS OF

HORSE AND OF HOUND

PREFACE

ALTHOUGH this little book consists of a lecture originally prepared for the members of the South Irish Horse, and afterwards delivered to them and to the officers of the Dublin Garrison, it is hoped that all owners of horses will find something of interest and something that is new and useful by a careful reading of its pages. The lecturer is fortunate enough to have been able to learn some of his experience in *Horse-mastership* from the training of horses whose deeds have left their mark on the history of the English turf during the past few years, and as these horses are mentioned, and their trials and troubles in some cases related, it is hoped that the sporting public will find these pages not without some interest to them.

Of course, the great purpose of the publication is to show how preventable disease can be prevented in the horse, and if in the next and succeeding years our sick lines of horses in a state of war—*i.e.*, picketed out or on annual manœuvres—is materially reduced, and if the reports of coughing and fever from the racing stables are of less frequent appearance in the sporting columns, then the object of the work will have been fully attained.

I have to acknowledge my indebtedness to Major J. Burns-Lindow, South Irish Horse, for his notes on the schooling of jumpers, which I have included in the Appendix; and to Messrs. Pathé Frères for the use of their cinematograph films, with which the lecture was illustrated.

F. F. M.

February, 1911.

HORSE-MASTERSHIP

In introducing the subject of Horse-mastership to the officers and men of the South Irish Horse, I feel that while, as your Medical Officer from the starting of the regiment under its old name and less onerous responsibilities, I need no introduction to any of you; still, when I stand up to talk to you of what is the most important subject to you—namely, Horse-mastership—I feel that I do need some introduction, and perhaps, apology for my presumption. Let me, however, before I approach the subject proper of my lecture to-night, first of all thank Major-General Campbell, G.O.C. the 5th Division, for the very great honour he has done me and the regiment generally by his presence with us here to-night, and, having said that,

let me apologize for venturing to address you on this important subject. As most of you know, all the time I have been with you I have had, either in Ireland or in England, from half a dozen to twenty race-horses under my own charge and care. I have lived for over two years at Newmarket, the headquarters of the horse in his highest development. There is no trainer—I prefer the word horse-master—there with whom I am not on terms of personal friendship and with many of whom I have discussed questions of horse-mastership. Add to this the fact that, while we are now, I think, complete in our list of combative officers, if you look at the Army List you will see two spaces that have never been filled in the South Irish Horse. I refer to the spaces under the headings of "Veterinary Officer" and "Chaplain." Now, I fear that my well-known fondness for the horse has for ever disqualified me—to say nothing of other disabilities—from taking the place of your sky-pilot; still, I do think that my medical

qualifications and my subsequent studies have well qualified me to take the place of your "Vet," and I propose for one night only to do so, and to leave it to you to judge how I act the part.

I have a particular reason for wishing to act that part for you. I do not know if I am to take it as an actual compliment or not, but as I have lectured to you and other regiments and officers on the subject of preventive medicine as applied to man, I do flatter myself—we all have our little weaknesses, and mine is that I have prevented some of you and others from getting sick—well, I do flatter myself that the very small daily sick-parade which I have to attend to while on training compares very favourably with that to be seen in any other regiment in the British Army. I have learned to note, for instance, on days when there is either "no parade" or an interesting field-day's work to look forward to, that it is permissible for me to stay in bed till it is almost time to appear on the parade-ground, for I am quite safe to have no sick

to attend to—a consideration of some importance, I may add, to an officer who has been known to sit up late calling "no trumps" with frequency. We have, indeed, during the whole of our eight trainings together, been practically free from any more serious cases for me to see than saddle soreness and the results of accidents, generally received more in play than at work. But, while our men have been free from sickness during the training, I cannot say the same of the horses, and the growing number of occupants of our sick lines has always been a worry to me. The most important part of my lecture to-night will be directed to showing you how you may prevent all this sickness, and as what I am about to tell you on that subject represents the results of many years of study and thought, I feel that perhaps when you have heard me you will grant that no apology is due from a Medical Officer who for one night presumes to take on the duty of Veterinary Officer to a regiment which never had a Veterinary Officer of its own.

I am sure, as we are not in any hurry to-night, that some of you would like to learn something of my ideas of the right sort of horse to get hold of to master. Here, however, I wish it to be clearly understood that I am only giving my ideas on what is, after all, a matter of opinion, and perhaps, too, I am prejudiced. I believe in the thoroughbred horse, and my advice to the man about to buy a horse is "get as much blood as you can," provided, of course, that he is free of the tear-away faults which too often follow his early experiences, and is, of course, in other ways suitable as to size, etc. In other words, my ideal of the horse for your purposes is the small thoroughbred, or, perhaps best of all, the horse by a thoroughbred sire out of a half or three-quarters bred hunter mare.

But you will ask, What is this ideal? How are we to know it when we see it? To that my reply is, go to a race-meeting if you cannot get any other opportunity of having a good look at a race-horse, and try to get a picture of his points in your mind

before you go out to search for your mount for the coming campaign. I myself have a great fancy for the horses that win races. It is said "they win in all shapes." But they don't. You never saw a horse with a really bad shoulder win a race. Therefore, as you can't very often get a good look at the winner —everyone wants to crowd round him—go to the second or third. One of these may have been trying to give the winner 14 pounds, and have been only beaten by a head or a neck; but nobody looks at him, and you can walk round him and thoroughly study his points. Of course, I only want you to take these points as an ideal, and avoid horses that differ very materially from the type. Look for good long sloping shoulders; look for horses that stand well and evenly on their fore-legs; look for something shorter in the leg than is usually the young thoroughbred; look for the small graceful head of the race-horse, the good neck, and the long sloping quarters. Indeed, it is almost a case of, in the words of the comic opera:

"Of course you can never be like us"

(meaning by "us" the thoroughbred type),

"Of course you can never be like us,
But be as like us as you are able to be."

It may strengthen your courage in your choice if I tell you that our Commanding Officer, Lord Waterford, although himself more of a believer in the hunter than the race-horse, likes to see the thoroughbred in the ranks. I remember a few years ago I sold a very beautiful little race-horse, called Rubric, to one of our most sporting N.C.O.'s, Sergeant Franks. This horse was quite capable of winning high-class races, only that he early took it into his head that racing was a silly game, and decided not to try. Well, at the first mounted parade the Colonel called my attention to this horse, as being his ideal mount for our game. I believe Rubric found heart enough to win our Troopers' Race, and I saw him win other contests of a more rough-and-tumble kind; but I only mention him here to show that you will not be wrong, in your Commanding

Officer's opinion, if you "be as like the thoroughbred as you are able to be." It is wonderful what an amount of weight an apparently underweight thoroughbred can carry all day and come in fresh, while the heavy-headed, hairy-heeled, ill-bred horse appears to collapse once he is asked to do anything out of his usual jog-trot.

It may interest you to know, too, that the Germans, French, and Italians, whose cavalry are now wonderfully trained, are filling their ranks more and more with the light-boned thoroughbred to the exclusion of the heavier type of horse.

Now that you have fixed upon what is your ideal of a horse, and we shall suppose you have succeeded in finding the horse that comes up to that ideal, you want to know if he is sound—or, rather, I should put it, sound enough for your purpose.

I have often been asked the most silly questions on this subject. People appear to think that there is some mystery about soundness, or the want of it, that takes a

veterinary surgeon, or at least a trainer of racehorses, to make head or tail of. Let me trouble you with one definition—the definition of unsoundness, which is "the existence of disease or alteration of structure which does or will interfere with the horse's natural usefulness." Now, if a horse has a disease, such as coughing, which is an unsoundness while it lasts, it is very easy to detect it when you examine the horse; and as to alteration of structure, if you only make a thorough examination of the joints and tendons of a thoroughly sound horse, and remember what his formation is like, you will very easily note any marked difference which is likely to interfere with your horse's natural usefulness. The test of soundness for your purpose is freedom from lameness in all his paces; and when you have tried him in this way, it is well to put him back in the stable, and bring him out again when he has had time to cool off. If he walks out without any "feeling," then he is sound for your purpose; and, assuming that you have

satisfied yourself that the horse can see all right, and does not make too loud a noise, and has good feet to stand on, you may buy him if the price is right, and you have received assurances that he is free from "vice," when a horse is returnable to the seller if you find that he is given to bolting, crib-biting, rearing up, or marked shying. In any of these cases a horse, although bought, must be taken back if the purchaser decides to insist upon his rights.

Now we have at last come to the stage when our trooper has bought his mount, and has him in good health and sound for military purposes. He has done this, I hope, some months before the annual training; and he wants to know how to keep his horse sound, and bring him to the camping-ground fit for the hard work before him, and looking so healthy and well that his squadron officer and his Commanding Officer will cast an approving eye on the trooper and his horse. To show him how to do this is the great object of my lecture to-night. The trooper

brings his gallant war-horse home, but before he does this I have a lot to say to him. What sort of a stable does he propose to put him in? What is to be the condition of that stable when it is ready for the horse? And at this point I beg of you to give me all your attention. It is here that all the harm is done. You may be disposed to say, "Oh, I can't build stables to suit you! I have to put up my horse in the best I can manage." Yes, I grant you all that, but it is the condition of your stable I want you to change, not to rebuild it. You remember how the length of our sick lines grew and grew during our last training? You may remember, even, seeing dead horses removed from our lines? Died of strangles, you said. Perhaps so. Exposure to cold and wet, you all said, and you speak of the awful time we had for ten days. I say, and I hope to prove to you before we leave here to-night, that every one of those sick horses brought the germs of their sickness from out of their dirty, ill-

ventilated, and dark stables, and that, had they not had these germs on the linings of their nostrils and throats, not one of them could possibly have got the specific fever from which they all suffered. No cold or wet could possibly give that, any more than cold or wet could produce a new animal. To prove this, let me go back awhile, and tell you something of the hard work and thought which brings me before you to-night.

Some eight years ago I had a small stable of race-horses under my charge. Coughing was reported from neighbouring stables, and presently my horses caught it. All got a temperature, in some cases as high as 106°; all looked sick; were coughing and running from the nose—in a word, all had the disease which caused the long sick lines at our camp in last and previous trainings. I then formed the opinion that this was a bacterial disease, and have since proved this by taking specimens of the nasal discharge, and submitting them to bacteriological examination. The usual pus-forming bacteria were found, as well as

a bacillus very like the Klebs-Löffler bacillus, which causes diphtheria in mankind.

Recent experiments proved that this bacillus lives for many months in dry dust in dark stables, but dies very quickly if left in the light. The same bacillus was found in the crusts of bran round the feeding-pots, and on the bridles of sickening horses. Direct sunlight killed it at once, and fresh air inhibited its growth.[1] I am trying to

[1] I had intended publishing at the end of this little volume the full notes on the bacteriology of coughing in horses, and the isolation of the colonies of the many micro-organisms obtained from the discharge taken from horses suffering from cough, with notes on the culture of some of these and the effect of their inoculations into other animals. This research, however, not yet being complete enough to prove to demonstration which of the organisms found is the cause and origin of the mischief, investigations are being continued in this direction, and will be subsequently published. The bacillus to which I refer above was found in *all* cases of coughing taken from horses in the early days of the disease, and an identical bacillus has been isolated from the many found round all neglected mangers or feeding-pots, so that although the third condition of bacteriological proof has not yet been fulfilled, I have no doubt whatever as to the true cause of the disease.—F. M.

avoid big words, but shortly it behaved as all pathogenic or disease-causing germs behave, and from its behaviour I learned my lesson. I got all feeding-pots disinfected daily, all dusty ledges and walls weekly, all bits immediately on removal from the horse's mouth. I insisted upon having the top doors of the stables always open winter and summer, and in summer I left the whole front of the box open. Result: I have never since heard a horse under my charge start coughing, nor have I ever seen one run white matter from the nose, nor have any horses suffered from fever or illness of any sort, except on one occasion, and that occasion actually helps to prove my case.

In 1907, those of you who follow racing matters may remember, I had charge of a most successful string of horses. Some of you may remember it, because it was the only training that I missed, and I am told you had a lot of sickness. Well, in that year I took over Rhodora and a few companions with the view of winning the Middle

Park and Dewhurst Plates at Newmarket. They arrived at Newmarket all right, but the disinfectant, "Eukotas," which I always used, because I found it killed the microbes without injuring the tender surface of the horse's mouth if a little of it got in, did not arrive as soon as the boys I had sent on to clean down and disinfect the stables. Now, these boys knew that there would be a frightful row if I could find any dust or cobwebs about the stables. So, as they had not any disinfectant with them, they broke one of my rules, which is, let sleeping microbes lie, unless you kill them with strong disinfectants before you disturb them. They swept down the stables dry—in other words, they filled the air of the stable with the germs of coughing, and gave my poor horses no chance of avoiding them. I at once predicted what would happen, removed the horses to other boxes across the yard, which I had had meanwhile properly disinfected and cleaned; but, alas! in five to ten days every one of these horses was coughing

badly, and although by means of fumigations I got them well very quickly, and they were able to fulfil their engagements, Rhodora, although sufficiently recovered to win a good trial, had not, I suppose, recovered her strength sufficiently to win the Middle Park Plate, and she caused me great disappointment by running very badly in it. That the coughing microbes alone cost her owner that valuable race was proved by the easy way in which she won the Dewhurst Plate after she had had fourteen days more to recover her strength. But this is wandering very far from the condition of your stables, although I hope you have never lost sight of the point or the moral I am trying to drive home. I am absolutely convinced—and I have worked at this problem almost ever since our last training, for my principal Newmarket patrons resented every year my coming over to you for the training, and took away their horses —that this disease, which caused so many of our horses to earn their £8 hiring fees in the sick lines, which caused some of them

to die, and sent home numbers of them roarers for life—for this is the great cause of non-hereditary roaring—is caused by nothing but this germ, which lives in the dirt of stables, gets from there into the nostrils and backs of the throats of our horses, and then when they are lowered by the cold and wet sets up this disease, which the horse's strength might have been sufficient to fight down had he been left all the time in his warm—perhaps too warm—stable, although they all would probably have developed the disease when the changeable and depressing weather of autumn set in. But my point is that, if these microbes were not allowed to get into the horse's nostril he could not possibly get the disease ; and I go further, I pledge my reputation on these matters, that any man who takes the following simple precautions will not have a sick horse in the forthcoming training, and if anyone finds his horse sick, and thinks he has carried out my directions, I hope that he will speak to me about it, and for our mutual information

discuss what point has been missed. Always remember that although I discourage sick parades and sickness amongst horses and young people as being unnecessary and quite out-of-date, I am always delighted to discuss any points on prevention. My rules, then, that I want you to adopt if you would be sure to have a healthy horse on parade are as follows:

1. Thoroughly disinfect the whole surface of your stable—*before* you put your horse into it—the feeding-pots, and walls with Eukotas, Jeyes' Fluid, Izal, or any thoroughly tested and reliable disinfectant, and the ceilings and white parts with lime-wash. The floor should be thoroughly swept out and fresh lime brushed over it.

2. Wash in and around all feeding-pots thoroughly daily with any reliable disinfectant—Eukotas for choice, as it does not injure the horse in any way.

3. Leave top doors always open day and night.

4. Have the floor of the stable exposed

to the air, with the whole door open every morning while the horse is out.

5. Keep your "kit" to yourself, and don't allow anything that may have touched any improperly cared-for horse to touch you or your horse.

6. If your nose-bag is not a new one, have it washed and steeped in strong disinfectant before you use it, and allow to thoroughly dry. Always after use turn it inside out, and leave the inside exposed to the sunlight whenever possible. Nose-bags require frequent cleanings and dryings. Caked food at the bottom of the bag is, being dark and damp, an ideal culture medium for germs.

Now, in a word, these six rules only mean—get your stable thoroughly clean, and keep it so, but you must not forget that, when you go on a railway journey, a horse-box is your stable for the time being. I always sent on a boy in advance to disinfect the horse-box before any of my race-horses were allowed to go on a journey.

About these rules—I do not think they

will present any difficulty in carrying them out; but I am sure, before you agree, you would like to argue about the top doors open. Many of my Newmarket friends argued that this is impossible in winter, and almost refused to believe that I stuck to it during cold wet nights. They told me that if I did I could not expect to have my two-year-olds ready before the autumn. Well, as I had my witnesses to prove, my horses never had their top doors closed; and when I was argued with this way, I could only say, "Wait and see." As those of you know who follow racing matters closely, the Brocklesby Stakes run for in March at Lincoln is the first big two-year-old race. It is a race that every trainer likes to win. I won it this year for Lady de Bathe with Footguard, who never knew what it was to be in a closed-up box till he left me.

I may add that, in all the years I have been training, I have had 50 per cent. of my two-year-old charges out and under colours—many of them winning colours, too—before

the end of May, and I never in my life have shut out the air or the light from them. This matter of light, by the way, is one I attach the greatest importance to. So much so, that in my place at Newmarket I had the lower part of the door so arranged—the whole door was made of strong galvanized wire netting—that sheets of plate-glass could be inserted in winter on the outside of the wire netting, so as to let in the full benefit of the sun's rays, and yet not have the horse too cold. You remember the importance I attach to light as being the best of all germicides. From your point of view—for you are not in Newmarket, where coughing is endemic—you need only have the top door always open, or, better still, taken away altogether.

Many bad stable habits are at once cured if you let the horse see out all day ; and, when we think of it, is it not terribly bad treatment for the poor horse to leave him twenty hours out of the twenty-four in almost or in complete darkness ? I should like to help

to do something towards securing more light for the horse during his long hours of what must be equal to imprisonment for an animal who loves exercise and is full of curiosity about his surroundings. Military stables, as a rule, are fairly well lighted by means of windows, and some of the newly-built stables at Newmarket—such as Mr. P. P. Gilpin's and the Hon. George Lambton's—are well lighted ; but, as a rule, even at Newmarket, and certainly all over the country, stables are far too dark. Never forget that light and disease germs cannot long exist together ; and, were we to be by some means cut off from the sun's rays, a few months of darkness would see the complete victory of disease in its war with highly organized life.

In a word, then, what I want you to do, if you would escape coughing, fever, and all such diseases when you go on training, is simply to get your stable absolutely clean before you put your horse into it ; keep it clean, and always allow plenty of Nature's own best tonics and germ-killers—fresh air

and sunshine—into your stable. If you do this really and thoroughly, you will bring your horse to camp without any disease germs in his nose or throat, which means that, no matter what the weather is like, he will get no cough or fever. Of course, while in camp you will be careful not to hand him on these germs by wiping out his nostrils with another man's sponge, which may, for all you know, be full of the germs of cough or fever.

I hope that I may pass from this subject, having convinced you all that it is worth while to try my prescription of absolute cleanliness as a preventive of disease for horses; and if I have succeeded in this, I can promise you that you will all notice how short the sick lines appear in next and future years. Of course I know that, in view of the number of horses hired out of dirty and dark stables, it is impossible, as we are at present constituted, to hope that the South Irish Horse could do without sick lines, except for horses suffering from the results of accidents. But might I suggest to those

who even hire horses that they should do something as missioners of health by insisting upon the hiring stables carrying out my simple directions? You cannot succeed with old-fashioned men and places, but it is worth trying in view of the importance of preventing sickness amongst our fast-diminishing number of possible war-horses. They tell me that a few years will see us involved in a great war with a European Power, and they talk of "defeat or more *Dreadnoughts*." As one who has seen something of the frightful wastage which war makes on the horse-supply of a country, my own idea is that, if we are to be defeated, it will not be for want of *Dreadnoughts*, but for want of mounted men and remounts for them. This is to my mind the most difficult problem any Secretary of State for War is called upon to face; but with these questions we have nothing to do here. What we have to do we can do—that is, that we know and make full use of the knowledge of how to take care that these horses which are placed in our charge, either

in actual war or our training for war, are kept free from preventable disease and death while we are in the field with them.

These diseases are, I repeat, preventable, and if somebody should ask, as the late King Edward asked, "If preventable, why not prevented?" I say that, if not prevented in the case of the horse who lives in an easily looked-after space, and does not mix with other horses in overcrowded stables, the reason is, and can only be, because man is too lazy to protect his best friend from unnecessary and perhaps fatal sickness.

And now we pass from the subject of preventable sickness. You have your horse and you know how to keep him well. You must also make him fit for the work that is before him; you must attend to his necessities and comfort generally, and you must know how to treat those accidents and little ailments which horse-flesh is heir to—a lot, perhaps you will think, to face in one lecture, but really not so, as everything about the horse is simple and common sense and easy if you do

it the right way. The first necessity, of course, is food and drink, and I am not going to assume that any of you who have paid me the compliment of coming here to listen to me to-night are so ignorant of the horse that you need to be told what to feed him on. None of you would complain to your company officer that your horse had failed to "pick up his seed." You all know, too, that you should always water your horse before you feed him, but I wonder if you all know why you should do this? The reason is very simple. The horse's stomach is, for the size of the animal, remarkably small, and has a remarkably large opening into the duodenum or first stage of the small intestine. If, therefore, you water your horse when his stomach is full of "seed," the water which passes at once from the stomach to the intestines carries with it much of the oats before the latter has had time to be properly acted upon by the gastric juices. It therefore passes along through the animal undigested and passes out with the waste. And this

very fact, that the horse's stomach is small, gives the reason for the next hint I want to give you, which is that your horse wants to be fed often. Four feeds per day is the training-stable rule, and it is most important to remember that a horse cannot go on long journeys for hours without receiving frequent feeds. In a state of Nature his head is always down eating when he is not moving about. In the artificial state in which we keep them all horses need more or less bran. If you give plenty of this with an occasional addition of linseed oil or well-cooked linseed, you will keep your horse in such a state of health that he will never need any medicine. I may tell you here that I thoroughly disapprove of all medicine, as being not only unnecessary but harmful to the horse. Watch the state of his droppings and give and keep giving as much bran and linseed as you can get the horse to take, while keeping his droppings from getting too soft. Of the two states it is far better to have them too soft than too hard. A horse suffering from con-

stipation is never well or fit for work. If you must give medicine, give linseed oil or a couple of ounces of Epsom salts in a bran mash. I always mix plenty of chaff with the oats which, for most horses, are best crushed. If you give plenty of chaff the horse must chew his oats properly and thoroughly, and, as I explained to you in my lectures on "War with Disease," the most important and essential part of digestion is carried on in the mouth. Unchewed food is never digested, and this is particularly the case with the horse who has splendid grinders for the purpose. These grinders, by-the-by, sometimes require a little filing, and I have known bad (apparently) horses converted into good ones by a little attention to the state of their mouths, and, indeed, in the case of young horses, I have seen the simple removal of lampas from behind the incisor teeth cause immediate improvement in form.

About hay, give as much as you find your horse eats, and give it to him as good as you can afford to buy. Don't give spiced

hay or hay showing the least sign of mould or smelling in the least bit that way. This tends to upset your horse's digestion. We in training stables pay great attention to our hay supply. Horses seem to run into form when they get hay that they really like, and to lose it as soon as they cease to enjoy their hay. You will find the use of hay nets a great saving, as they prevent waste which otherwise always goes on if hay is thrown loose in a box or stable ; and, of course, out of doors they are, I consider, a necessity, as they prevent all chance of your horse's supply of hay being taken off by the wind, a result which is otherwise sure to happen. Hay to a horse is like bread to a man ; he wants plenty of it, good and sweet, with each meal and between meals, otherwise he overgorges with oats and suffers from indigestion.

With that remark we pass from the digestive system, and having that in order, we now can consider what training our horse requires to make him fit for his military work. Here so much depends upon what the horse

has been doing before he came into your hands it is impossible to lay down anything like hard-and-fast rules. I can only give you the general hint by reminding you of the old saying: "It is not the miles we travel, but the pace that kills." That should be always ringing in your head when you are training your horse for military work. You won't overwork him as long as you keep slow, and notice how he gradually begins to sweat less freely and show anxiety for faster work as he gets more and more fit. A horse enjoys his work, and you should keep him out of doors as long as you can. Two hours every morning and half an hour in the afternoon is my training-stable rule, but you ought, if you can, get your horse able to do three hours every morning, varying the work, walking, now trotting, now leading him, occasionally a slow steady canter, and then his head down to pick grass.

This last, by the way, is one of the little things that tells with a horse. He likes being made much of, and I strongly advise

every trooper to spare himself no trouble to become "pals" with his horse and get to understand him thoroughly. This will pay you well and you will find, if you try it, that the horse, and particularly the thoroughbred horse, has far more brains and affection for his master than most people are disposed to give him credit for. A horse that has been really well looked after by his owner will almost speak and will certainly make you understand what he wants and that he is thankful for what he gets. A horse is, I find, always anxious to please, and although, when he is well, he may wish to play in a way you do not want or appreciate, still to my mind all the vice and badness in a horse is put into him by bad management and darkness.

After exercise comes grooming, and here again I presume that all my hearers have had practical lessons and do not wish to waste time talking about it. One thing only I must say, and that is that I am a believer in what is called the "American system" of

grooming—that is, get the horse thoroughly clean in every part of him and then don't worry him any more. The object of grooming is to get the skin clean, so that it may perform its functions unimpeded by any dead skin or dirt which would otherwise stop the pores; and when you have got your object attained, I think it is a mistake to go on, with the idea of massaging the horse's muscles. Exercise in the open air is the best massage; and about the so-called "American system" of looking after horses, I should like to say one word. It consists of open top doors; no rugs in summer, and in some cases none in winter; plenty of cut grass, and in fine weather plenty of time spent picking grass on the roadside. A sand-bath when the horse returns from work, quick effective grooming, and no worrying of the horse afterwards, and a walk out for half an hour in the afternoon to air the stables and vary the monotony of the day—that is the "American system" in as few words as I can put it. It was first introduced into this

country by Huggins and the Messrs. Duke and Wishard. They won a lot of races, and the ideas were called the "American system." It will interest you to know that every one of these ideas was in daily use by me in a small stable I had out at Kilgobbin, Co. Dublin, for years before the Americans came to England, except the sand-bath, which I learned about from my friend Mr. W. Duke, as well as several other very useful hints, particularly as to working—"breezing" and "stepping," as he calls it—and timing horses in their fast and steady work. I won plenty of little races, too, but I suppose my ways were unknown, and hence what ought to be known as the "Irish system" became known as the "American," and so will be till the end of time.

The Americans, too, by the way, let their horses' tails grow very long, and do not, as a rule, square off the ends of them. I also did this in Ireland before an American trainer ever appeared in England, where, by-the-by, the fashion of leaving the tail long has never

been taken up to any extent. You may remember that when Orby went over from this country to win the Derby of 1907, the Press were very loud in their expressions of opinion that nothing so good as a Derby winner could possibly come out of Ireland; and indeed, almost the only piece of encouragement—if it was encouragement—we got was the statement which went the rounds of the papers, to the effect that "no matter where Orby finished, he would have a long tail behind him." He and Volodyovski were the only two horses, I think, that ever won the Derby with long tails; but I am rather keen on the long tail left to grow in Nature's way, and, in any case, I have a perfect horror of a docked tail—a barbarous cruelty for which I would give a man "time" if I had my way—or any tail so cut and squared off that it looks like a docked tail. I got the idea of leaving horses' tails long and flowing from seeing the use they made of these instruments to flick off flies during the summer months, and I heard a traveller's tale of horses' tails which

you may take from me as true and is very interesting, as showing that "horse sense" is perhaps more rational than you may have been inclined to credit it with being.

In a district of Australia, a lot of thoroughbred horses were as usual out on the plains doing for themselves when a perfect plague of flies came down upon them, and worried the horses, as they did the men looking on, by landing all over them. The flies proved particularly annoying by the persistency with which they kept crowding round the eyes of the horses. But the horses soon formed a plan of campaign to defend their eyes. They lined up in single file, the first horse looking north while the next looked south, and so on alternately, so that each horse's head had his next-door neighbour's tail to flick the flies off his head and eyes. This is a perfect fact, and not a fairy-tale. They stood in this position for hours, and, what is more, it was noticed that if one horse ceased to use his tail as a "fly-flicker" for a moment, he was at once called to order by a bite from his neglected mate,

which was perfectly understood, as it immediately caused the tail to wag again. Thus the "kicking-end," controlled by a reminder from the "biting and thinking end," completely overcame the worst effect of the plague of flies. Another instance of "horse sense" and horse learning and evolution is supplied to us all by the behaviour of horses nowadays when they meet a motor-car, electric tram or other horseless carriage. I remember the day—it is not so many years ago—when my brother, now chief city engineer in Calcutta, bought the second motor-car that ever ran in Ireland. It was an awful production that required to have some part of its internal anatomy made red-hot before you could start it. He took me for a ride on it, and we caused such consternation amongst the horses as we passed along that I registered a vow—which vow I have long ago broken—that I should never again drive in such abominations. I remember at the Stillorgan railway bridge a most beautiful pair of horses half jumped over the bridge on to the railway-line. That incident

finished me, and I completed my journey on foot. But take a yearling out now, or take any country horse that has never seen a motor-car upon our roads before. He does not pay the slightest attention to them, provided he has been associating with horses which have already seen motor-cars in action. In other words, their actions leave no room to doubt but that horses have some way of talking to and teaching each other. I can well imagine the mare telling her foals that when they go on the roads they will see wonderful cars that move without the aid of horses, but although noisy and emitting a most unpleasant odour, she, we may be sure, tells them that these things are harmless. I can remember, too, although that is a long time ago now, in the days of the old high bicycle, horses often took fright at bicycles, and especially at tricycles. They hardly look upon them now, and the last horse I have seen seriously alarmed at a motor-driven means of locomotion was out at Sandyford, where the thoroughbreds took serious alarm at the fly-

ing-machines when they saw them and heard them above them in the air. I have no doubt but that in a few years the mothers will have told their offspring that cars parading about in the air need not be a cause of serious worry as they but seldom—comparatively—fall, and there is no case on record of their having fallen on a horse yet, so that in future they need not stop grazing to worry about flying-machines. I hope, too, that when my principles are more universally adopted horses may even show their resentment if put into an undisinfected stable. I am satisfied already that they like the smell of these, and give a snort of satisfaction as they are led into a freshly-disinfected stable. This sense of smell, is, I am sure, very strongly developed in the horse. In the late war in South Africa my first mount there was a Boer pony, and I am perfectly convinced that he could smell barbed wire. He certainly gave me ample notice of it by a peculiar snort whenever we approached it on our night marches. But I must not wander on giving

you these instances of "horse sense"—which really does exist—or I shall never get to the end of my labours of to-night. I think I have told you enough to show you that the character of the horse is worth studying as well as its habits and wants.

I should add a few words about such diseases of foreign, or active service, as surra, which is common in India, and which is conveyed by the bite of a blood-sucking fly; nagana, or horse-sickness, of Africa, which is carried by a species of the tsetse fly; the annoyance caused by ticks, the carriers of relapsing fever in man, and many as yet imperfectly understood diseases in horses and in hounds. At the close of this lecture I have arranged to show you a very remarkable series of pictures, which I have called "some battle scenes from the war with disease,"[1] and when we have the actual carriers of these diseases walking and moving about on the screen, and the actual causes—

[1] I am indebted to the kindness of Messrs. Pathé Frères for the use of their ultra-microscopical cinematograph films with which this lecture was illustrated.

the *Trypanosoma Brucei* and *Lewisi*—on view and in fighting trim, I shall say more about them. When you see, for instance, the appalling battle which goes on in the blood between the trypanosomes and the white corpuscles in the blood of rats dying of sleeping sickness, you will, I feel sure, resolve, if you go on active service, to take every possible precaution to protect yourself and your horse, as far as possible, from the attentions of ticks and tsetse flies, and even from horse-flies. This is an extremely difficult problem, but you can do something with a "fly-flicker," always handy and in use; and no one should ever travel without a bottle of disinfectant with which to wash off ticks as soon as they are seen on a horse's flanks. When washed with disinfectants they at once drop off. If pulled off, their nippers are sure to remain in the tissues, and cause a small open sore, which sometimes is the starting-point for the inoculation of another disease. I should like, too, to get reports from any of you

who may happen at any time to have an opportunity of trying the idea of your carrying with you a small box of the ointment I recommended to you in "War with Disease" as a preventative of syphilis—*i.e.*, an ointment consisting of one part calomel and two parts lanoline. If you rubbed this well into the site of the bites of the tsetse, horse-flies, or ticks, it seems certain that the trypanosomes would be killed before they could get too deep and multiply. It is an interesting, though a useless, piece of consolation for you to know that the ticks, like the mosquito, which I shall show you in life and motion to-night, are always female. The females of these alone suck blood. The male dies practically immediately after he has commenced married life. In insect life, indeed, the rule generally is to treat the male horribly badly. The female spider, for instance, eats her husband as soon as he has done his duty by her; and the female scorpion out-Crippens Crippen by tearing her "worser half" into several joints and frag-

ments, which she proceeds to scatter about and then eat up; while the drone bee, if he succeeds in captivating a queen on the wing, actually dies in the act; and if he fails to capture a queen, and wishes to remain a bachelor bee, living on honey which he does not help to gather, he is stung to death by the suffragettes—I mean the working bees, which are sexually undeveloped females. The female tick, too, is of interest to us here in Ireland, because an epidemic of relapsing fever, which she, as well as the common louse, is the carrier of, was described as long ago as the time of Hippocrates, that great physician having well described the symptoms and physical signs of the disease. From his time the disease dropped out of medical literature, until it was re-described at the close of the eighteenth century as a peculiar "Dublin fever." It was very common in Ireland during the famine years, and up to the present day ticks give a fever to hounds in this country which is pretty sure to be caused by a spirochæte, such as you will

see presently on the screen. The tsetse fly, which you will also see, may be either male or female. Both suck blood freely, the tsetse fly being one of the very few flies which does not lay eggs, but carries her young and feeds them on blood till they are through the larva and ready to enter upon the pupa stage. I like to mention these little points, because one of the most gratifying results of my former course of lectures has been that I have received such interesting letters from former members of the regiment who have gone to other countries, and are kind enough to write to me of their experiences of fighting disease and of dealing with accidents where surgeons are hopelessly ungetatable. To know how disease is caused is generally to avoid it, if you will take the trouble. The *Trypanosoma Brucei*, which I shall also show you on the screen, alive and full of motion, is the cause of horse-sickness, which those of you who have followed history in South Africa must have read much of. But this, I fear, is all wandering

with our heads down, picking at the fresh spring grass, and thinking of forms of life which are much lower than the horse; and as there is still much to say before we can be said to have completed the subject of horsemanship, so the order is once again, "Stand to your horses."

Now we have learned to feed our horse, to exercise him, to groom him, and to know something about his character, and a little of the parasites which may get into his blood and destroy his health. What remains but to know how to treat the results of accidents and those minor ills and discomforts which horse-flesh is liable to suffer from?

Let me dispose of the results of accidents first. On these I do not propose to detain you long. A few general principles will do to treat all ordinary cases. I want you never to forget that in dealing with a horse you are dealing with an animal built in all respects of the same flesh and blood as you yourselves are composed of. Those of you who

remember my lectures on anatomy and first aid will not have forgotten that I traced the bones in the horse to the corresponding bones in man. Well, his flesh and blood is just the same, too. He has the same, or corresponding, nerves of sensation, and the treatment I give you for wounds and injuries is in all cases suitable and proper to the horse. That is to say, if he has a cut it must be got perfectly clean; bleeding must be stopped by pressure, as in man, and wounded joints, tendons, etc., all require rest and hot fomentations as the first condition. Nature heals; we only put the parts in the best position and circumstances for Nature to do her work. We can really do but little to aid her, and by unnecessary interference we too often do actual harm where we wished to do good. In treating any injury or disease, always be sure that you know all the effects of the drug or treatment you propose to adopt. If you think deeply over this, and know enough of the actions of the agents you propose to employ, it is wonderful how

often you will decide to leave the case to Nature, and when you are asked by curiosity-hunters as to what will be the effect, you will reply in the words of the wise physician, "A few days will tell a great deal."

So much, then, for the results of ordinary accidents and wounds. I still must tell you something of the care of the feet, and the avoidance of saddle wounds and sores on the horse. With feet I have had a lot of trouble in the early days of my training—sore, hot feet, cracked heels, brittle feet, and even actual lameness and loss of many races. Here, again, I have learned that the secret of health is perfect cleanliness, and the removal of every sign of moisture from the hoof and heels, and otherwise a policy of non-interference with Nature's ways. All the cutting and paring of hoof and frog simply does harm. Put on good shoes if you are doing road work. A horse worked on grass alone is better without any shoes, and of course you will, whenever possible, remove all shoes when you are turning your horse out on

grass for a rest. But beyond the application of good shoes by an experienced man, your work about your horse's feet is only: keep clean, absolutely clean, and get dry, absolutely dry, before you leave him in his stable. Leaving a horse's heels imperfectly dried is the cause of cracked heels. I dismiss my groom if the horse gets cracked heels. I do not believe in washing the feet too often When I agree to it, I always put a little Eukotas, or permanganate of potash, in the water, as both these tend to soothe, and afterwards to harden, the skin. When perfectly clean and dry, I always have the feet stopped with "Leucoid," a putty-like preparation which keeps them aseptic and in health. When I began to study horses, cow-dung was always used for this purpose. It is still the resort of the insanitary, and only shows into what ignorant hands the care of the poor horse has fallen.

Now as to saddle-galls. These are always caused by carelessly-fitted saddles, or by saddles which have spread and lost their shape.

The principle to bear in mind is not to allow the central line of the back to carry any weight. The weight must be borne each side principally on the ribs, which are protected for the purpose by muscles.

Have I, then, not spoken of all the ills you will be likely to be called upon to deal with? I think I have, except perhaps colic, or gripes. No properly fed and watered horse should get these. Your treatment is at once to give a hot drink. Water with a little flour mixed in it, and given luke-warm, is all the treatment you should attempt.

Do not give opiates or drugs of any sort. You do not know enough to risk these things, which often do one part good and ten parts harm. Above all, when you think, or are told, your horse's kidneys are wrong, avoid giving nitre. This is the first resort of the ignorant stableman. It is always given in doses which are far too large. I have known young race-horses who promised great things, and who, I know, were good horses, whose careers

ended in that oblivion which is the penalty in man and in animals of want of health, because they overeat themselves, and suffered from indigestion, and were drugged with nitre till their kidneys suffered incurable damage. Drugs in the hands of the semi-ignorant are like firearms in the hands of children—neither should ever be played with. Send for a veterinary surgeon if anything is seriously wrong. His opinion, at any rate, is sure to be of use to you, especially if you can get the opinion of an up-to-date one, such as are now being yearly turned out by our Royal College of Veterinary Surgeons in Ireland, or from one of the Fellows of the College. In the old days veterinary surgeons' treatment was too much confined to the idea of balls or bullets. I never give a horse a ball, except for the purpose of expelling worms, if the state of his skin and general health suggest that he has them. And as to a bullet—the "friendly bullet" as it is called—if some part of a horse's structure has undergone such an injury that he cannot regain his usefulness,

or any part of it, then the merciful bullet is, unfortunately, the "only way." A broken leg in the horse is, I am sorry to say, in 99 cases out of 100, best treated this way. The horse cannot be got really to rest the painful part, and, even if slung, he soon, with a broken leg, renders himself an object of pity, from which death, mercifully given by the bullet in the middle of the forehead, is indeed relief.

I fear that by this I must have thoroughly tired you out, so let me, before we separate, recall your minds to the most important part of this lecture by reminding you of a very well-worn story taken from the classics. You have all, I am sure, heard of the twelve labours of Hercules, which were imposed upon him by his enemy Eurystheus. The fifth of these labours was to clean out the stables of Augeas. These stables contained, in addition to some horses, many thousands of oxen and goats, and they had never been cleaned out. The poor animals were buried in their own excrement, and, although history

does not relate it, I am quite sure they must have been all coughing, and in a high state of fever. Now, Hercules was a bit of a wonder in his time, and he won great glory from the way he executed all his labours successfully. In this case he seems to have had a river handy, and he simply altered the course of it, so that it ran through the stables and cleared out all the dung, and left the stables and the animals clean and healthy. Why they weren't all drowned, if the waters rose high enough to make the stables clean, according to my idea, I can't tell you. The event is too far off; and perhaps they all got a swim, and then the river was changed back again. It is the moral of the story brought up-to-date that I wish to impress upon you. Go to any stables you like, and, remembering the light which the modern microscope has thrown on the meaning of the word dirt, and I say the celebrated Augean stables were not one bit worse than is nearly every stable in the United Kingdom to-day. Look round the corners of their mangers, along

their dusty cracks, and their cobwebbed corners, and remember the diphtheroid bacillus to be found there. Cast your minds back to our sick lines at the Curragh in the third week of our training last year. No accurate record of numbers of sick was kept, but I am sure there were 60 or 70 horses there out of our 450 horses which should have been on parade. Will you, the South Irish Horse, act the part of the modern Hercules, and resolve to conquer in this labour? You have the river handy, as we had—nay, you have an ocean of fresh air, and streams of sunlight, only waiting to be let in, and your horses in their prison-cells eagerly waiting for them. These are better than any river, if you first thoroughly clean out and disinfect the whole of the inside of your stables. It is original work; no one has ever before, as far as I know, pleaded for the light of day and the fresh air to be let in to the horse in his hours of darkness. No regiment has had such a chance to be first to do something for the health and

comfort of our fast-diminishing war-horses. If each man can do his share—that is, to protect his own horse from bringing microbes into our camping-ground—the whole Army must notice that the South Irish Horse have conquered disease. And in doing this you will do something for your country as well. We all know that Irish-bred horses win far more than their share of races on the turf, both in England and all over the world. Why? has often been asked. My answer is—and I have visited the great studs in England as well as Ireland—because the Irish-bred horse gets more fresh air and less confinement in his dark box than is ever given in the English fashionable studs. If to their natural freedom, which our horses get, you add—I almost fear to use the word—surgically clean stables—stables containing fresh, not used-up, air and rays of sunshine—then the example of the South Irish Horse will have done something substantial, not only to add to the health and happiness of the noblest animal on this globe, but you

will also, by preventing sickness and unnecessary deaths, have done much to add to the wealth of the nation, and you will score a big point for those who have fought, and are still fighting, to remove the insult which enacts that Irishmen are unworthy to bear arms except in the "first line," or when a state of war makes our rulers glad to take anyone who is ready to fight.

APPENDIX

BEING NOTES TAKEN OF THE PROCEEDINGS AT A MEETING OF N.C.O.'S AND MEN OF THE SOUTH IRISH HORSE AT THEIR HEADQUARTERS IN DUBLIN

At the conclusion of the lecture reported in the foregoing pages, Major-General Campbell, for whose very kind remarks the lecturer has to express his indebtedness, asked if anyone had any questions to put. None were then suggested, but conversations during the next few days made it clear that there were points upon which young horse-masters desired further information. Another meeting of the members of the regiment was then decided upon, and subsequently held at headquarters in Dublin. This further meeting was all the more necessary as, in arranging the scope of the lecture, it had been intended to make a

feature of "Notes on Schooling Jumpers," by Major J. Burns Lindow, M.F.H., O.C., C Squadron, South Irish Horse; but these, owing to a mistake in the address they were sent to, had not been received in time. These notes are given below; and it may be mentioned that the fact was recalled, amidst great applause, that Major Lindow had won on a horse of his own and schooled by himself the open jumping competition at the last Dublin Horse Show, held by the Royal Dublin Society in August, 1910, and had been placed fourth at the same show in the competition confined to the military. His instructions on the making of jumpers are bound to be read with great interest by all horse-masters; and it was pointed out at the meeting that no horse should be considered qualified to take his place as a war-horse unless he had been properly schooled to jump, if necessary. I give Major Lindow's notes as he sent them, with a letter, in which he begged me to be sure to make it clear that he "only sent them on to oblige me, and in no way wished to appear to want to lay down the law to men who could give him seven pounds and a beating over any course." Readers of the

following can judge of the value of these notes for themselves :

Jumpers.

Nearly every horse can be trained to jump, I believe. Of course there are exceptions, but undoubtedly a horse which has been bred by the breaker, and known and loved him since foaled, is the easiest to school.

Any remarks I am now making are to be understood to have reference to the schooling of hunters. I will briefly refer to show-jumpers later, but it is an art apart, of which I know little, and care almost less.

All training for jumping is better conducted by interesting the animal in what you wish to teach it than by forcing it to learn it by punishment. No animal, including man, puts forth its best efforts under compulsion or through fear of punishment. There are two "schools" of training jumpers—the single-rein school and the double. Many good men swear by each, so I do not presume to recommend either, but personally I prefer the single rein, as savouring less of compulsion.

In the single-rein method, all that is required is a cavesson or head-collar and a long rope, or, better still, a web rein. The rope or rein should be thirty or forty yards

long, so that it can be allowed to run through the trainer's hands when the horse jumps, and so avoid pulling up the animal short immediately it lands. The rein must be fastened to the cavesson, and on no account on to the bit, as any unintentional jerk on the rein would hurt the horse's mouth if fastened to the bit, and make the horse shy of jumping in future. As a matter of fact, few horses require anything in the mouth at all when schooled in the single-rein method ; but it is sometimes better to have a head-collar under the cavesson, with a plain snaffle in the mouth, if the animal is very excitable ; the reins on the snaffle are knotted up on the neck, and not touched unless absolutely necessary. Though I hate bandages for hunters as a rule, I always school with bandages on the fore-legs, and sometimes all round ; young untrained horses sometimes knock themselves about terribly at first if not bandaged.

Now, having got your horse ready for schooling, it only remains to choose your country and begin. The education should be very gradual, and a young horse should never be asked to jump anything which he is frightened of or doubtful about until he has grasped the idea that when he is presented at a fence he is to jump it, and that it is also possible and safe for him to do so. If

he is forced over obstacles or put down early in his education, he may become frightened or cowardly, and will never make a really bold, willing jumper. When he has once learned what is required of him, and ceased to be nervous at the novelty of the proceedings, "spilling" him will not matter, but he will see that he isn't put down often if he can help it.

The actual mode of training is as follows: Taking the cavesson rein in one hand, close up to the horse's muzzle, and with the loose end of the rein coiled in the other hand ready to run out when necessary, the trainer leads the young horse quietly up to the obstacle, and encourages him to jump "out of hand." The trainer's assistant should follow at a safe distance behind the animal, and should carry a whip with a thong on it. The less this implement is used the better, but a crack or two keeps an unwilling animal up to his work, and it is seldom necessary to actually hit the horse; if by any chance it is, the punishment should never be inflicted just before the horse takes off, as it will probably cause him to bungle his "lep." The trainer must from the first teach his horse to jump before he (the trainer) jumps, and on no account should he ever jump before the horse: it is a most dangerous proceeding. While the horse is being presented at the fence, the assistant

should be most careful not to get on the far side of the horse from the trainer, as by so doing he would probably cause the animal to swerve on to the man who is leading him. If much difficulty is experienced in leading the horse up to the fence, a snaffle bridle can be used for this purpose, the cavesson being put on over the head-collar. From the beginning the horse must be trained to jump everything quietly from his hocks; almost every sized obstacle can be got over in this manner by a riderless horse. Later on, when the horse jumps freely, and you want to smarten him up a bit, you can run in with him to the fence for the last few yards, and teach him to jump from a trot and a gallop.

The moment the horse jumps the rein should be allowed to run out of the disengaged hand, and the horse should have perfect freedom while jumping and until well into the next field. Very soon he will not require pulling up at all on landing, but will stop of his own accord and graze. Some horses have a trick of swerving on to the man who is leading them at the moment they should take off; for this reason the trainer should carry in the leading hand a light switch, and if the horse tries to swerve towards him tap him smartly on the muzzle. One or two taps will soon prevent this trick, and if the horse tries to swerve in future it

will be away from the trainer and not on to him; this is easily prevented by the rein.

As far as I can, I have in the above remarks touched on any distinctive features of the single-rein method, and will now go on with the double-rein or driving method. For this way two light ropes or reins are attached, as in ordinary driving, to the rings of the snaffle, and carried back through a "D" on either side of the surcingle, each "D" being well down the horse's ribs to give greater power, and not on top of the back.

The trainer then takes a rein in each hand —he must be careful on no account to join the loose ends—and, walking as close behind the horse as safety permits, he drives the horse towards the fence it is to jump. The loose ends of the reins are allowed to trail on the ground; the reins should be of sufficient length to avoid pulling up the horse immediately he lands. On arrival at the obstacle, when the horse jumps the trainer allows both reins to run through his hands until the horse is well into the next field, and then, by gradually putting pressure on one rein only, brings the horse round in a circle and stops him. Should a horse at any time fight or try to bolt, by dropping one rein and keeping tight hold of the other, he can be brought round in a circle, and kept in it until he becomes amenable again.

I forgot to mention that the surcingle, which I previously mentioned in the double-rein method of schooling, is in Ireland generally omitted, and its place taken by a saddle with leathers and stirrups. These latter are secured under the horse's belly by a strap or cord, and the driving-reins are run through the stirrup-irons instead of the "D's." Such, briefly, is the double-rein method, which its patrons claim gives them greater control over a horse than the single rein. I cannot but think, though, that if all horses were schooled carefully on the single rein, the control which is claimed for the double rein would not be required. It is urged against the double-rein method that, owing to the control of the horse being accomplished through the medium of the mouth, horses are liable to be made shy of jumping through being jerked in the mouth, either when they fall or when any accidental tightening of the reins takes place.

All that has previously been said about care in selection of obstacles, the gradual increase in the size of the fences, and not hurrying or forcing young horses, applies equally to either method of schooling, and in both cases kindness is the only real method of successfully teaching jumping. A young horse should always be encouraged rather than scolded, and should be petted

and made much of when he has done what is asked him.

Finally, whenever you are schooling, never go alone, and never school on fences which you don't know both sides of, or, better still, have looked at both sides of. The first precaution is necessary, because any accident to yourself—such as a sprained ankle from jumping — puts you in a very unpleasant position if there is no one with you, as does an accident to the horse if your presence with him is required and you have no one to send for assistance. The second precaution may save you a promising horse which would otherwise have jumped into a trap and been injured.

There is just one other thing which I want to mention, and that is, change your country as often as possible when schooling, and never disgust a horse by jumping him back and forward continually over the same obstacle. After a horse which has been schooled by either of the above methods has acquired confidence and knows how to look after himself, you can put up a quiet horseman on him. Begin again from the beginning with small obstacles and at a walk, and gradually increase the size of the jump and then the pace. I forgot to mention earlier that broad banks should be chosen always for the first lessons; narrow banks at this time of

the horse's education are apt to make him fly them, which is fatal. Any horse which can jump banks can be taught to fly later, but the converse by no means holds good.

After you are satisfied that with a man up the horse can be taught nothing further, send him out with hounds, but insist on the man riding him quietly. On no account let him be shoved along for several weeks, or you will almost to a certainty make him pull.

Now just a few lines on show-jumpers, which I am even less qualified to write about than hunters.

The class of jumper (as far as I can learn from the foreigners, who know much more about it than we do) that scores in the show ring is an animal with a certain natural balance and carriage during the act of jumping. Of course he must be a good performer in the sense of getting over the obstacles correctly and safely, but it is his carriage which scores from other equally good jumpers in the hunter sense. A blood horse seldom or never has this carriage, which is another argument to my prejudiced mind showing what a poor game show-jumping is. It is impossible, I believe, to drill this particular carriage into a horse, but all good show-jumpers over the class of fences they meet in Olympia are constantly put over the obstacles the show-jumper is required to negotiate. (These

obstacles, as far as the ordinary hunting man can see, are specially selected as being the most unlikely things that a horse will ever be required to jump outside of a show-ring.) During this training abroad, where the most successful show-jumpers are taught, I believe it is no uncommon thing for considerable cruelty to be exercised.

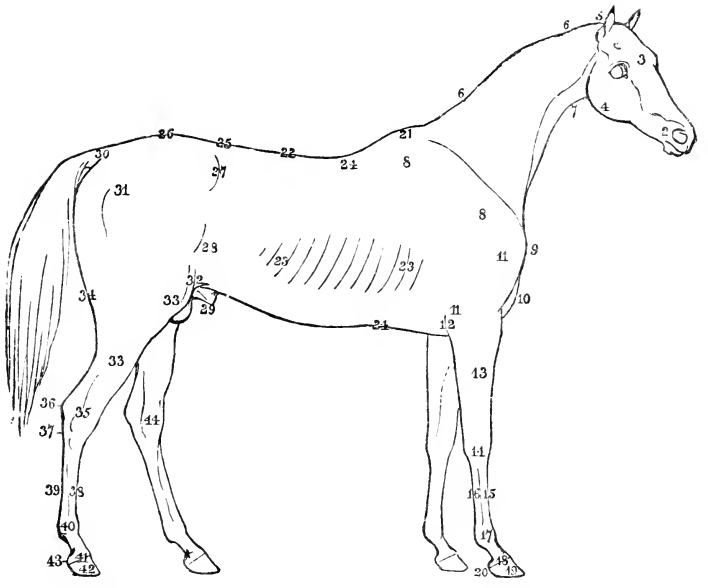
When writing of show-rings, of course I am not alluding to Balls Bridge, or the majority of Irish shows, where horses and riders get as nearly as possible a natural country. Even here, however, the show-jumper with carriage will score from an equally good jumper without it, but it by no means denotes that he is the best hunter.

Having by now, if any of my readers have got so far as this, shown plainly how little I know about the subject, I think I had better stop before I get farther out of my depth. I only wish to emphasize again that any of the above views, which I have put in the first person for convenience, are only my own dim personal lights, and would never have been put on paper except at the request of a friend.

* * * * *

The next point upon which it was evident men, and particularly the recruits, wanted information was the names given to the

different parts of the external anatomy of the horse. The picture given opposite explains these. Every trooper should learn off these points; otherwise, if something is wrong, he will be quite at a loss to explain himself intelligibly to anyone. Many people wanted information on the treatment of such surgical conditions as splints, curbs, spavins, and bowed tendons, and the general principle was laid down and agreed to that, when such had ceased to do harm—*i.e.*, cause lameness—they should be left alone. On the other hand, pain, heat, swelling and lameness, once localized, was always to be treated by removing the cause where possible, and treating effects by the application of *heat*, locally applied, first by means of hot bathing, or the application of bandages wrung out of hot water, and this was to be followed by the application of hot poultices of "Leucoid" or "Antiphlogistine." When the acute stage had passed, and Nature required further help to carry on her repair by the presence of an extra supply of blood, blistering with such preparations as "Equamint" or "Reducine" was recommended. Firing and the application of the old-fashioned



HEAD.

1. Muzzle.
2. Nostril.
3. Forehead.
4. Jaw.
5. Poll.

NECK.

6, 6. Crest.
7. Throttle or windpipe.

FORE-QUARTER.

8, 8. Shoulder-blade.
9. Point of shoulder.
10. Bosom or breast.
11, 11. True-arm.
12. Elbow.
13. Fore-arm (arm).
14. Knee.
15. Cannon-bone.
16. Back sinew.
17. Fetlock or pastern-joint.
18. Coronet.
19. Hoof or foot.
20. Heel.

BODY, OR MIDDLE-PIECE.

21. Withers.
22. Back.
23, 23. Ribs (forming together the barrel or chest).
24, 24. Circumference of the chest at this point, called the girth.
25. Loins.
26. Croup.
27. Hip.
28. Flank.
29. Sheath.
30. Root of the dock or tail.

HIND-QUARTER.

31. Hip-joint, round, or whirl-bone.
32. Stifle-joint.
33, 33. Lower thigh or gaskin.
34. Quarters.
35. Hock.
36. Point of the hock.
37. Curb-place.
38. Cannon-bone.
39. Back sinew.
40. Fetlock or pastern-joint.
41. Coronet.
42. Hoof or foot.
43. Heel.
44. Spavin-place.

(From Stonehenge's "Horse in Stable and Field.")

severe and painful blisters was condemned as being both brutal and useless, and the hope was expressed that firing as a treatment for horses would soon be as completely abandoned as it has long since been for man, although it was once the fashionable resort of surgeons—but that was before the days of chloroform, when people liked giving pain. The necessity of rest for all cases involving pain was insisted upon, pain being, as was pointed out, Nature's hint to stop.

* * * * *

Disinfecting in actual practice was discussed, and here great ignorance was shown. There is nothing simpler. Procure a gallon of any disinfectant, read the directions on the cask, mix in the proportions indicated, and simply wash the parts with a sponge. For example, order a gallon cask of Jeyes' Fluid or "Eukotas" from any chemist, pour a cupful of the fluid into a bucket of hot water; wash all parts as directed with this, wipe up thoroughly, and pour the remaining fluid down the sink when finished. The more disinfectants there are about the stable the better: horses like them; micro-organisms die at the touch of them.

Many men expressed their fear that disease was spread at camp by means of the water in the troughs becoming infected. It was agreed that this possible line required guarding by the early isolation of cases to the sick lines and a separate drinking trough; but the men were urged not to try to put the blame of a spread of disease on this possible cause, as they were again reminded that the most important result of their temporary and honorary veterinary officer's investigations was to show that the cause of coughing—the dark-stable bacillus—*could* not live in the light. Therefore, while it was allowed that this was a *possible* explanation of some of our cases last training, when we had ten days' continuous rain, during which the sun hardly shone out from behind the clouds, the fact was emphasized that, as the water troughs were in the sunlight, no such organisms could long live there. Whether the microbe could even live in water is more than doubtful, but troopers were requested to report to the medical officer cases of coughing next training, so that investigations to settle this point might be undertaken then.

* * * * *

Major Burns Lindow, who has been kind enough to read through the proofs of this book, has written as follows: "I think there is just one weak spot in your work, so far as we are regimentally concerned. I do not doubt your treatment, and, provided a man has his horse before the training, I think you have shown us how sickness can be prevented and how a man can bring his horse clean to camp and free from bacteria in his nose and windpipe; but the horse which you don't allow for, and which, in our case, is nearly always the infection carrier, is the *dealer's horse*, either just bought or hired. *Can you tell men of any treatment which, immediately the horse is in their hands, will clean out the latent microbes before the horse's lowered vitality gives the bacteria a chance of starting work?*" This is a most important question, and I am particularly glad to have been asked it, as it reminds me of one thing I forgot, and also gives me a chance to explain. My answer will not, I fear, be considered quite satisfactory. Major Lindow suggests syringing out the nose and throat. I am sorry to say that I fear this could do no good. A disinfectant strong enough to kill

bacteria on, and partly embedded in, the tissues would so injure the tissues, if locally applied, as to actually lower their resisting powers. If possible, the enemy must always be prevented from effecting a landing. But if he does land, as he is sure to do in the case of horses kept in the dark, dirty stalls of the average dealer, then our difficulties and the dangers to our territories are enormously increased, and if the horses' resisting powers are at the same time lowered, as no anti-serum has yet been perfected, I fear in our present state of knowledge coughing and fever—which really means a fight in the blood—must follow. I can only say what I do when a new horse comes under my control from any other stall—and I am extra particular in the case of horses which have been in show-yards, or yearling sale-ring stables. Immediately on his arrival home the horse gets a hot bran mash, with plenty of hot boiled linseed mixed through it. His throat and lungs are then fumigated by the burning of a disinfectant. This operation is carried out as follows : The horse is led into a box by his attendant ; the box is closed up, and another attendant brings into the stable

a shovel which had just been made red hot in the saddle-room fire. Crude Sanitas or crude carbolic acid is placed on this, and the attendant stays with the horse in the box, now full of these fumes, as long as he feels he can stand it. By this means antiseptic fumes are passing down the nostrils and back of the throat of our horse; and while I do not say that this is enough to kill germs, I repeat that, since I investigated the cause of this disease and took these precautions, I have not had any of my chargers suffer from it. I therefore recommend that all hired horses should be fumigated in this way before being taken to camp. As a further precaution, and one I have more belief in, I have on several occasions ordered a large *hot* "Leucoid" poultice to be applied to the throat of the horse coming out of specially dirty-looking stables. This substance holds the heat even longer than linseed and draws blood to the part, so helping to defeat the invaders.

I hope that men will take these two precautions with all hired horses this year. I do not say they are infallible, but they have succeeded so far with me. Further, I propose at our next training to have a note

taken of the place whence all horses developing sickness at our camp have come. By this means it is hoped that we may get up a "black list" of dealers to avoid. I have very little doubt but that this sickness can be stopped; but I fully agree with Major Lindow that the hired horse is our greatest difficulty, and is a difficulty so great that no blame can be attached to anyone in the regiment for the large numbers of our horses absent from parade through preventable sickness. But the men can do much to force the dealers to clean out their stables, and, with all ranks helping, a satisfactory result is assured in the future.

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